

REMARKS

I.     Introduction

In response to the Office Action dated August 13, 2004, claims 4, 9 and 14 have been amended. Claims 1-15 remain in the application. Re-examination and re-consideration of the application, as amended, is requested.

II.    Claim Amendments

Applicants' attorney has made amendments to the claims as indicated above. These amendments were made solely for the purpose of correcting typographical errors and clarifying the dependency of the claims, and were not required for patentability or to distinguish the claims over the prior art.

III.   Information Disclosure Statement

In paragraph (2) of the Office Action, the Information Disclosure Statement (IDS) was objected to as not complying with 37 C.F.R. §1.98(a)(2), because a copy of Canadian Patent No. 2,191,640 was allegedly not provided.

Applicants' attorney respectfully traverses this objection, and asserts that the reference was provided to the Office. Applicants' attorney notes that the reference was listed on the form PTO-1449 and no interlineations were made by the Office on the return postcard, indicating that the Office received the reference, although it was apparently lost by the Office after receipt.

Nonetheless, a copy of the reference is being submitted herewith, along with a copy of the documents previously submitted, including the transmittal papers, IDS, form PTO-1449, and returned postcard (showing no interlineations). However, Applicants' attorney asserts that no fee, certification or petition is required for entry of this reference, because of its prior proper submission. Consequently, Applicants' attorney requests that the form PTO-1449 be returned with the entry for the reference initialed by the Examiner.

IV.    Claim Amendments

In paragraph (3) of the Office Action, claim 4 was objected to because of certain informalities.

Applicants' attorney has amended the claims to overcome this objection.

V. Double Patenting Rejection

In paragraph (4) of the Office Action, claim 1 was provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5, and 7-8 of copending Application No. 09/939,813.

Applicants' attorney notes the provisional nature of this rejection, and will address the rejection upon an indication of otherwise allowable claims.

VI. Prior Art Rejections

A. The Office Action Rejections

In paragraph (5) of the Office Action, claims 1-15 were rejected under 35 U.S.C. §102(a) as being anticipated by Sheard, U.S. Patent No. 6,208,345 (Sheard).

Applicants' attorney respectfully traverses these rejections, in view of the arguments set forth below.

B. The Applicants' Independent Claims

Independent claims 1, 6 and 11 are generally directed to developing multi-tier business applications. The computer-implemented system of claim 1 is representative, and comprises an Integrated Development Environment (IDE), executed by a computer, for creating and maintaining a multi-tier business application on a multiple tier computer network, wherein the IDE includes a Topological Multi-Tier Business Application Composer that is used by a developer to graphically design, develop, maintain, build, test, debug, and deploy the multi-tier business application, a Meta-model that captures and persistently stores information entered via the Composer, and an Interactive Agent that monitors the Meta-model for an occurrence of one or more specific events, whereupon the Interactive Agent triggers a display of a graphical element in the Composer to interact with the developer, and the graphical element includes context information comprising a list of suggested and recommended actions.

C. The Sheard Reference

A visual data integration system architecture and methodology is disclosed. The system architecture includes a transport framework that represents a technology-independent integration mechanism that facilitates the exchange of technology-dependent data between disparate applications. A visual interface facilitates the design, deployment, and runtime monitoring of an

integrated information system implementation. An integrated information system is developed visually through use of the visual interface by dragging and dropping components within a canvas area of the interface. The components are graphical representations of various telecommunications hardware and software elements, such as information stores, processors, input/output devices and the like. Various components may be packaged together as business extension modules that provide specific business integration capabilities. Interconnections between components are graphically established using a mouse to define sources and destinations of specified data. An underlying configuration/runtime information framework operating above and in concert with the transport framework effectively transforms the graphical interconnections into logical or physical interconnections, which results in the contemporaneous generation of an integrated runtime system. Format neutral data meta-models are employed to model the input and output data requirements of disparate systems and system components so as to remove any cross-dependencies that exist between the systems and technologies implicated in a data integration project. The visual interface enables runtime control and analysis of the business information and system aspects of an integrated system implementation. Visual views onto the live deployment provide consistent management and control for system integrators, business integrators, system managers, and business managers using a single visual interface.

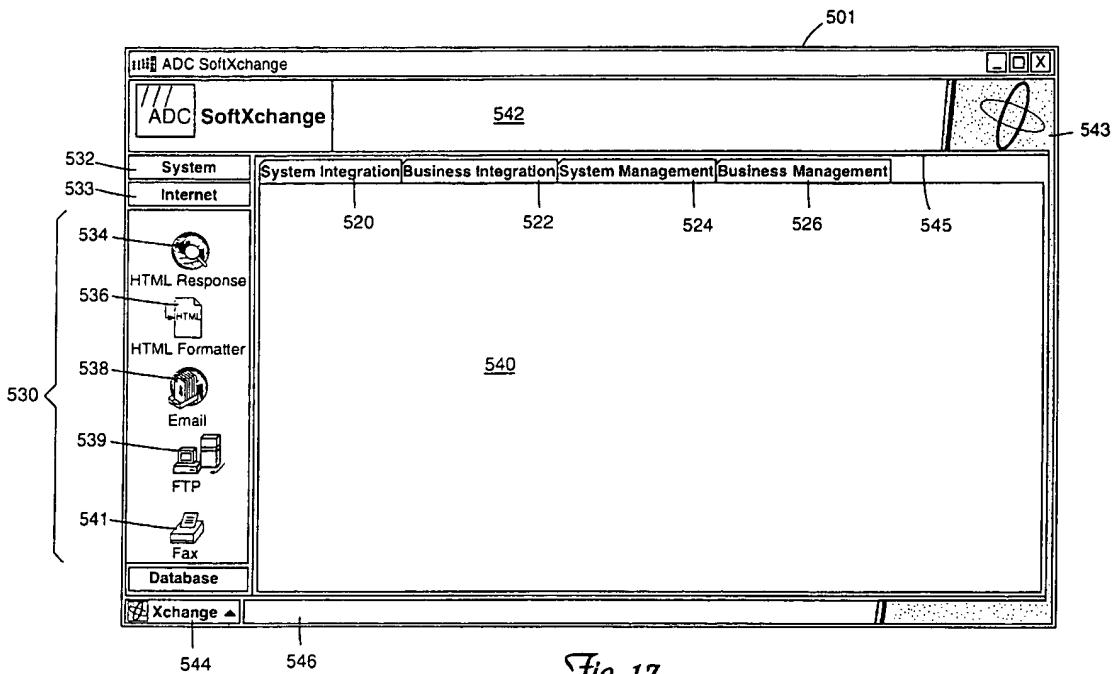
D. The Applicants' Invention is Patentable Over the References

The Applicants' invention, as recited in independent claims 1, 6 and 11, is patentable over the references, because it contains limitations not taught by the references.

Specifically, the references do not teach or suggest the specific combination of limitations found in the independent claims, including the limitations "an Interactive Agent that monitors the Meta-model for an occurrence of one or more specific events, whereupon the Interactive Agent triggers a display of a graphical element in the Composer to interact with the developer, and the graphical element includes context information comprising a list of suggested and recommended actions."

The Office Action, on the other hand, asserts these limitations are shown in Heard in FIG. 17 and associated text, and specifically, col. 19, lines 51-63. These portions of Sheard are reproduced below:

Sheard: FIG. 17



*Fig. 17*

Sheard: Col. 19, line 6 – col. 18, line 2

In accordance with the embodiment depicted in FIG. 17, the visual interface 501 includes a canvas 540 which represents the main area of the visual interface 501 where data integration deployments are constructed and managed. A system selection button 532 provides a user the ability to select between various information system deployments or projects. A business extension selection button 533 provides for user selection of any of the various business extension modules 505 that are made available to the user.

Business extension modules purchased by a user are typically loaded into the system and automatically become available when appropriately selected using the business extension selection button 533. For example, the palette 530 shown in FIG. 17 includes the set of components/adapters which are part of business extension module #1 shown in FIG. 16. As discussed previously, these components/adapters provide access to legacy applications through use of internet type technologies. Selection of business extension module #1 by the user is indicated by the "internet" status of the business extension selection button 533.

Clicking on a selected business extension module using the selection button 533 results in displaying of the constituent components/adapters associated with the selected business extension module. Each of the components or adapters constituting a given business extension module is represented in icon/button form in the palette 530. In FIG. 17, for example, contents of the Legacy-to-Internet business extension module displayed in icon form in palette 530 include adapters for HTML Response 534, HTML Formatter 536, Email 538, FTP (File Transfer Protocol) 539, and Fax 542. The palette 530 is provided with a scroll bar to access adapters that are not presently displayed in the available space of the palette 530.

The upper area 542 of the visual interface 501 contains an animated logo 543 for the data integration tool. This logo 543 becomes animated when the system is running, thereby providing an easily perceivable indication as to the status of the system. The area 545 to the left of the logo 543 is available for tool bars as are deemed necessary or desired. A tool bar may be developed to provide a shortcut to desired primary menu items. Each button of a tool bar included within the upper area 545 generally provides pop-up tool tips associated with it.

In the bottom left corner of the visual interface 501 is an Xchange button 544. Activating the Xchange button 544 opens a pop-up menu of common system wide commands and configuration controls. A first group of menu buttons, which may be accessed via an appropriately configured tool bar or by activation of the Xchange button 544, may operate on project files, and include the following activatable buttons: new, open, save, delete, and print. A second group of buttons may include start, shutdown, pause and resume the system buttons, for example. Menu items may be disabled when their operation is not appropriate for a given context. The lower border 546 of the visual interface 501 is available for high-level status information and for help prompts that may be useful during configuration.

The canvas 540 of the visual interface 501 includes four tabs 520, 522, 524, 526 for activating four different available views of an information system layout. The four views activatable using tabs 520, 522, 524, 526 include System Integration, Business Integration, System Management, and Business Management views, respectively.

The above portions of Sheard do not teach or suggest monitoring a Meta-model for an occurrence of one or more specific events, and then triggering a display of a graphical element in the Composer to interact with the developer, wherein the graphical element includes context information comprising a list of suggested and recommended actions

Indeed, nothing in Sheard refers to such monitoring or triggering functions. Instead, Sheard merely refers to a visual interface with a menu of commands and controls, including the use of a “help” function within the interface.

Thus, the Sheard reference does not anticipate or render obvious Applicants’ claimed invention. Moreover, the various elements of Applicants’ claimed invention together provide operational advantages over Sheard. In addition, Applicants’ invention solves problems not recognized by Sheard.

Applicants’ attorney submits that independent claims 1, 6, and 11 are allowable over Sheard. Further, dependent claims 2-5, 7-10, and 12-15 are submitted to be allowable over Sheard in the same manner, because they are dependent on independent claims 1, 6, and 11, respectively, and thus contain all the limitations of the independent claims. In addition, dependent claims 2-5, 7-10, and 12-15 recite additional novel elements not shown by Sheard.

• VII. Conclusion

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Respectfully submitted,

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Date: November 12, 2004

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